

## CONTENTS

Volume 40, 1973

AHARONOV, DOV. On pairs of functions and related classes . . . . .	669
AKEMANN, CHARLES A. AND PEDERSEN, GERT K. Complications of semi-continuity in $C^*$ -algebra theory . . . . .	785
ANDREWS, GEORGE E. On the $q$ -analog of Kummer's theorem and applications . . . . .	525
AZOFF, EDWARD A. $K$ -reflexivity in finite dimensional spaces . . . . .	821
BABAKHANIAN, A. Exponentials in differentially algebraic extension fields . . . . .	455
BARTLE, ROBERT G. AND KARIOTIS, CONSTANTINE A. Some localizations of the spectral mapping theorem . . . . .	651
BASTIDA, EDUARDO, R. The Krull-Akizuki theorem in the abstract . . . . .	411
BECKER, JOSEPH AND STUTZ, JOHN. The $C^1$ embedding dimension of certain analytic sets . . . . .	221
BERGLUND, M. C. F. Ideal $C^*$ -algebras . . . . .	241
BERNDT, BRUCE C. On Gaussian sums and other exponential sums with periodic coefficients . . . . .	145
BERNHARDT, ROBERT L. On centrally splitting . . . . .	903
BLEVINS, DONALD K. Conformal mappings and domains bounded by quasiconformal circles . . . . .	877
BOLSTEIN, RICHARD. Strictly cyclic operators . . . . .	683
BRAUN, LOUIS J. On the structure of fibrations . . . . .	371
BRAUNER, KALMAN. Duals of Frechet spaces and a generalization of the Banach-Dieudonné theorem . . . . .	845
BRILLHART, JOHN. On the Rudin-Shapiro polynomials . . . . .	335
BUTLER, KI-HANG AND KRABILL, JAMES RICHARD. Abelian subsemigroups enumeration, and universal matrices . . . . .	587
CARLESON, LENNART. On the distortion of sets on a Jordan curve under conformal mapping . . . . .	547
CARLITZ, L. AND SCOVILLE, RICHARD. Partially ordered sets associated with Fibonacci representations . . . . .	511
CARLITZ, L., SCOVILLE, RICHARD AND VAUGHAN, THERESA. Enumeration of permutations and sequences with restrictions . . . . .	723

CARLITZ, L. Some inverse relations.....	893
CARLITZ, L. AND SUBBARAO, M. V. Transformations of arithmetic functions.....	949
CARMICHAEL, RICHARD D. Distributions of exponential growth and their Fourier transforms.....	765
CHEN, BANG-YEN AND OGIEU, KOICHI. Some characterizations of complex space forms.....	797
CIMA, I. A. AND THOMPSON, JAMES. On strong extreme points in $H^p$ .....	529
COOPER, BENJAMIN G. Doubly stable two-stage Postnikov systems.....	115
DAVIS, BURGESS. On the distributions of conjugate functions of non-negative measures.....	695
DEUTSCH, FRANK, POLLUL, WALTER AND SINGER, IVAN. On set-valued metric projections, Hahn-Banach extension maps, and spherical image maps.....	355
EVERETT, C. J. Fermat's conjecture, Roth's theorem, pythagorean triangles, and Pell's equation.....	801
EWING, JOHN. Sphere bundles over spheres as loop spaces mod p.....	157
FAKLER, ROBERT A. On Mackey's tensor product theorem.....	689
FLETCHER, PETER AND LINDGREN, WILLIAM F. Erratum. Orthocompactness and Strong Čech completeness in Moore spaces.....	959
FRISTEDT, BERT AND TAYLOR, S. JAMES. Strong variation for the sample functions of a stable process.....	259
GALAMBOS, JANOS. A general Poisson limit theorem of probability theory.....	581
GOULD, H. W. AND HSU, L. C. Some new inverse series relations.....	885
HAYES, DAVID R. The Galois group of $x^n + x - t$ .....	459
HEDBERG, LARS INGE. Approximation in the mean by solutions of elliptic equations.....	9
HEINE, J. AND WARNER, SETH. Ring topologies on the quotient field of a Dedekind domain.....	473
HENRICH, CHRISTOPHER J. The $\bar{\partial}$ equation with polynomial growth on a Hilbert space.....	279
HENSON, C. WARD AND MOORE, L. C. Invariance of the nonstandard hulls of locally convex spaces.....	193

HIRSCHHORN, M. D. A continued fraction of Carlitz.....	77
HIRSCHORN, RONALD. Topological semigroups, sets of generators, and controllability.....	937
HOCHSTER, M. Non-openness of loci in Noetherian rings.....	215
HODEL, M. J. Weighted sequences of nonnegative integers.....	493
HOEL, C. A note on local solvability.....	839
HOOK, EDWARD C. Equivariant cobordism and homotopy type.....	805
HSU, L. C. AND GOULD, H. W. Some new inverse series relations.....	885
HUDSON, RICHARD H. A bound for the first occurrence of three consecutive integers with equal quadratic character.....	33
JORDAN, STEVEN L. Three invariants for complex manifolds.....	925
KARIOTIS, CONSTANTINE A. AND BARTLE, ROBERT G. Some localizations of the spectral mapping theorem.....	651
KRABILL, JAMES RICHARD AND BUTLER, KI-HANG. Abelian subsemigroups enumeration, and universal matrices.....	587
KRIETE, THOMAS L. Fourier transforms and chains of inner functions...	131
LANCASTER, G. M. Canonical metrics for certain conformally Euclidean spaces of dimension three and codimension one.....	1
LELONG-FERRAND, JACQUELINE. Étude d'une classe d'applications liées à des homomorphismes d'algèbres de fonctions, et généralisant les quasi conformes.....	163
LEONARD, PHILIP A. AND WILLIAMS, KENNETH S. Representability of binary quadratic forms over a Bézout domain.....	533
LINDGREN, WILLIAM F. AND FLETCHER, PETER. Erratum. Orthocompactness and Strong Čech completeness in Moore spaces.....	959
LONG, ANDREW F., JR. Factorization of irreducible polynomials over a finite field with the substitution $x^{p^r} - x$ for $x$ .....	63
LONGYEAR, JUDITH Q. Small configurations and their arrays.....	871
MASAT, FRANCIS E. Right group and group congruences on a regular semigroup.....	393
MCGRANERY, CLARK. A cohomological criterion for real boundary points.....	661
MCKINNEY, JUDITH REEVES. Kernels of measures on completely regular spaces.....	915

McMILLAN, JOHN E. AND PIRANIAN, GEORGE. Compression and expansion of boundary sets.....	599
MIELKE, M. V. Cohomology and module bundle coefficients.....	449
MIERS, C. ROBERT. Lie derivations of von Neumann algebras.....	403
MOORE, C. EDWARD. Concrete semispaces and lexicographic order.....	53
MOORE, L. C. AND HENSON, C. WARD. Invariance of the nonstandard hulls of locally convex spaces.....	193
MUSKAT, JOSEPH B. AND ZEE, YUN-CHENG. Sign ambiguities of Jacobi sums.....	313
NAGEL, ALEXANDER. Flatness criteria for modules of holomorphic functions over $\Theta_n$ .....	433
NIEDERREITER, H. AND PHILIPP, WALTER. Berry-Esseen bounds and a theorem of Erdos and Turan on uniform distribution mod 1.....	633
NIELSEN, OLE A. The Mackey-Blattner theorem and Takesaki's generalized commutation relation for locally compact groups.....	105
NORDGREN, ERIC A. AND ROSENTHAL, PETER. Algebras containing unilateral shifts or finite-rank operators.....	419
OGIUE, KOICHI AND CHEN, BANG-YEN. Some characterizations of complex space forms.....	797
PEDERSEN, GERT K. AND AKEMANN, CHARLES A. Complications of semicontinuity in $C^*$ -algebra theory.....	785
PETRICH, MARIO. Normal bands of commutative cancellative semigroups.....	17
PHILLIP, WALTER AND NIEDERREITER, H. Berry-Esseen bounds and a theorem of Erdos and Turan on uniform distribution mod 1.....	633
PIRANIAN, GEORGE AND McMILLAN, JOHN E. Compression and expansion of boundary sets.....	599
POLLUL, WALTER, DEUTSCH, FRANK AND SINGER, IVAN. On set-valued metric projections, Hahn-Banach extension maps, and spherical image maps.....	355
PUTCHA, MOHAN S. Positive quasi-orders on semigroups.....	857
REED, G. M. Concerning first countable spaces II.....	677
RICKMAN, SEPO. Path lifting for discrete open mappings.....	187
ROBINSON, WILLIAM. On $\Lambda_1(\alpha)$ -nuclearity.....	541

ROCHBERG, RICHARD. Almost isometries of Banach spaces and moduli of Riemann surfaces.....	41
ROSENTHAL, PETER AND NORDGREN, ERIC A. Algebras containing unilateral shifts or finite-rank operators.....	419
RYAN, PATRICK J. Kähler manifolds as real hypersurfaces.....	207
SACKER, ROBERT J. AND SELL, GEORGE R. On the existence of nontrivial recurrent motions.....	815
SALINAS, NORBERTO. Reducing essential eigenvalues.....	561
SANDERS, THOMAS J. On the generalized and the $H$ -shape theories.....	743
SCHNEIDER, ROBERT B. Extreme points in $H^1(U^n)$ .....	425
SCOVILLE, R. AND CARLITZ, L. Partially ordered sets associated with Fibonacci representations.....	511
SCOVILLE, R., CARLITZ, L. AND VAUGHAN, THERESA. Enumeration of permutations and sequences with restrictions.....	723
SELESNICK, S. A. A Hopf algebra approach to the Krein duality theorem	831
SELL, GEORGE R. AND SACKER, ROBERT J. On the existence of nontrivial recurrent motions.....	815
SHILEPSKY, ARNOLD C. Homogeneity by isotopy for simple closed curves	463
SINGER, IVAN, DEUTSCH, FRANK AND POLLUL, WALTER. On set-valued metric projections, Hahn-Banach extension maps, and spherical image maps.....	355
STANLEY, RICHARD P. Linear homogeneous diophantine equations and magic labelings of graphs.....	607
STUTZ, JOHN AND BECKER, JOSEPH. The $C^1$ embedding dimension of certain analytic sets.....	221
SUBBARAO, M. V. AND CARLITZ, L. Transformations of arithmetic functions.....	949
TANNY, S. A probabilistic interpretation of Eulerian numbers.....	717
TAYLOR, S. JAMES AND FRISTEDT, BERT. Strong variation for the sample functions of a stable process.....	259
TERRAS, RIHO. On almost periodic and almost automorphic differences of functions.....	81
THOMAS, J. W. The multiplicity of an operator is a special case of the topological degree for $k$ -set contractions.....	233

THOMPSON, JAMES AND CIMA, J. A. On strong extreme points in $H^p$ . . . . .	529
THRUBER, EDWARD G. On addition chains $l(mn) \leq l(n) - b$ and lower bounds for $c(r)$ . . . . .	907
VALENT, RICHARD. Basic intervals and related sublattices of the lattice of topologies . . . . .	487
VAUGHAN, THERESA, CARLITZ, L. AND SCOVILLE, RICHARD. Enumeration of permutations and sequences with restrictions . . . . .	723
WARNER, SETH AND HEINE, J. Ring topologies on the quotient field of a Dedekind domain . . . . .	473
WEINSTOCK, BARNET M. Inhomogeneous Cauchy-Riemann systems with smooth dependence on parameters . . . . .	307
WESTALL, JAMES M., JR. Banach Spaces of $l^p$ valued holomorphic mappings . . . . .	755
WILLET, MICHAEL. Matrix fields over $GF(q)$ . . . . .	701
WILLIAMS, KENNETH S. AND LEONARD, PHILIP A. Representability of binary quadratic forms over a Bézout domain . . . . .	533
WILSON, DAVID. Open mappings on manifolds and a counterexample to the Whyburn conjecture . . . . .	705
YANAGIHARA, NIRO. The containing Frechet space for the class $N^*$ . . . . .	93
ZEE, YUN-CHENG AND MUSKAT, JOSEPH B. Sign ambiguities of Jacobi sums . . . . .	313

